

Mayo Clinic Q & A - Dr. Gregory Poland -Respiratory viruses

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SPEAKERS

Dr. Halena Gazelka, Narrator, Dr. Greg Poland

N Narrator 00:01
Coming up on Mayo Clinic Q&A.

D Dr. Greg Poland 00:03
So you've heard this term tridemic. What people are trying to explain is that after the holidays in the amount of travel, most people now are not wearing a mask. They're embarrassed to wear a mask. They're fatigued of it. The virus could care less it will exploit that, and many people are going to be surprised.

N Narrator 00:23
The current triple threat is the flu, RSV or respiratory syncytial virus and COVID-19. The flu is always common this time of year COVID-19 spikes are not uncommon. Meanwhile, RSV is causing symptoms that can be severe for young children and immunocompromised people.

D Dr. Greg Poland 00:41
Most people recover from home just fine with RSV, but there are categories very young children, as I say immunocompromised, the elderly, they may develop RSV pneumonia, and in some cases, develop severity such that they need hospitalization.

D Dr. Halena Gazelka 00:58
Welcome. everyone to Mayo Clinic Q&A. I'm your host. Dr. Halena Gazelka. And we're recording

this podcast on Monday, November the 28th, 2022. Well, it has been quite a while since we've talked about the news of the day here on Q&A. And we have a lot to cover today. COVID-19, influenza, RSV, all of those are in the news. So, let's get to it. I am pleased to have back with us today, Dr. Greg Poland. Dr. Poland is an infectious disease virology and vaccine expert at Mayo Clinic. Welcome back, Greg.

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Dr. Greg Poland 01:32

Thank you, Halena. It is so good to be together again.

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Dr. Halena Gazelka 01:34

I know I feel it has been so long I was missing these conversations that we have.

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Dr. Greg Poland 01:40

Indeed.

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Dr. Halena Gazelka 01:41

Well, thanks for being here. All right. So, Greg, you know, I feel that now RSV has overtaken what I'm hearing about COVID. Tell us what's going on. Who is affected by this? How do we protect people?

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Dr. Greg Poland 01:56

Yeah, great question. So, I mean, and you're right Halena. RSV has surged in a major way, not only in the U.S., but globally. In fact, when you look at who gets infected, anybody across the age spectrum can and does get infected. The concern is about who will tend to have more severe disease requiring hospitalization. That tends to be younger kids, particularly under six months to two years of age, people who have immunocompromised, particularly chronic lung, heart disease, or as I say, are immunocompromised, and then the elderly. That's where the risks are. So, we want to be cognizant of that. And, you know, most people recover from home just fine with RSV. But there are categories, very young children, as I say immunocompromised, the elderly, where they may develop RSV pneumonia, and in some cases develop severity such that they need hospitalization. Look at our own state of Minnesota. As of last week, only two of the 144 pediatric ICU beds in the state were open. And only 29 of over 400 general ped beds in the state were open. So, this significant issue.

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Dr. Halena Gazelka 03:21

Wow, that's incredible. And so, Greg, that must be why there's a concern about the emergency departments getting so full and clinics and hospitals, it's probably very difficult for pediatricians and those who care for children to keep up with the demand.

D Dr. Greg Poland 03:38

Yeah, well, you know, the fortunate thing with otherwise healthy kids is they are going to get better. They do well with it. It is a miserable thing to have and they're out of school, but they'll recover. The key is if somebody is not recovering. If somebody's developing high fevers, if they're having trouble breathing, that's a reason for evaluation in regards to RSV. Influenza and COVID are different because we have specific treatments for those. The good news, though, with RSV is that a number of vaccine manufacturers have developed vaccines. A couple of them through phase three trials, and, very likely, certainly before this time next year, I think we'll have a licensed RSV vaccine for adults. And then they'll move clinical trials down to kids, so we're definitely making progress there.

D Dr. Halena Gazelka 04:32

Say, Greg, I saw something on the news this morning that I wanted to ask you about because I do want us to get caught up on COVID-19 as well. And it was news to me that there was still restriction on activity in China, due to COVID-19. What's going on here in the United States and what's going on around the world?

D Dr. Greg Poland 04:51

Yeah, it's an interesting thing. We're in this what I call a "wobble stage", where you look at deaths, those have decreased. But last week 335 Americans died of COVID. For the most part, at this point, no one should die of COVID. These are mostly elderly, immunocompromised, or people who have not been vaccinated and boosted. And that's a key point. However, having said that, currently, we have about 3000 people a day in the United States who are hospitalized with COVID. And when you add up those deaths, it's about 2600 a week. Now, that's about an eight-to-10-fold decrease from last year at this time, and probably relates to the amount of illness-induced and vaccine-induced immunity in general across the population in the US. So, at this point, if you're immunized and otherwise healthy, the issue is not that you'll die, and it is very unlikely you'd end up on a ventilator or hospitalized. The issue is the mutational rate of this virus. Every time people get infected, spreading it to highly vulnerable people, and the considerable risk, and this is what people discount, who have never experienced these things, the considerable risks of long COVID and COVID related complications. And again, those are considerable. We would be foolish to discount those. And I will say, of the hundreds and hundreds of patients I've been consulted on, not one of them, thought that their life would become what it has become as a result of complications from this virus.

D Dr. Halena Gazelka 06:48

You said something that, you know, we used to talk so much about the variants and what the latest variants are. What's happening with variants of COVID?

D Dr. Greg Poland 06:59

Dr. Greg Poland 08:59

So this is a very interesting situation, one of the first I've seen in my 40 year career as a vaccinologist. We're no longer having single variants that completely predominate, like we had alpha and then we had beta, delta. Rather, we're seeing what's called convergent evolution, meaning a swarm of subvariants from omicron. And several of those are very grievous, I would call them. BQ.1.1, BQ.1 and BA.5, BF.7, BN.7, these are variants that, for all practical purposes, have now evaded in full or in part, past illness-induced immunity, vaccine-induced immunity, and are causing us to no longer be able to use monoclonal antibodies. So, this is a real issue for people who can't get immunized, or for people who are immunocompromised, we don't have monoclonal antibodies that can reliably protect them anymore. And this is a consequence of people not masking, people not getting boosted, and getting infected over and over again. This virus is exploiting that. And so, you've heard this term tridemic. What people are trying to explain, and we've already seen it with RSV, but after the holidays and the amount of travel and most people now are not wearing a mask. They're embarrassed to wear a mask. They're fatigued of it. The virus could care less. It will exploit that and many people are going to be surprised over these holiday wintertime periods, because very likely, we'll have a surge of influenza and COVID related to this kind of behavior.

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Dr. Halena Gazelka 09:01

Greg, you mentioned two things that I do want to ask you about. One is the latest on vaccines. And the other is you mentioned monoclonal antibodies not to being effective. Are we still using them?

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Dr. Greg Poland 09:14

We are because there's some percentage of them that would still be susceptible. And the problem is, we don't have point-of-care sequencing, such that we could rapidly determine if a monoclonal is going to help this person or not. But for example, Evusheld was a monoclonal antibody given to people who are immunocompromised or who couldn't get further doses. It, essentially, no longer works. The same with all of our other monoclonal antibodies except in a few exceptions. So that's a problem. In terms of getting a booster, it's interesting. Only 12% of people over the age of five have gotten the updated booster.

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Dr. Halena Gazelka 10:00

Oh, really?

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Dr. Greg Poland 10:01

This is really a problem.

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Dr. Halena Gazelka 10:02

Isn't that surprising, given how long we've been dealing with this?

D Dr. Greg Poland 10:06

Only 69% of the population has had a primary series. I mean, it's really remarkable how people have been swayed by myths and disinformation. And to their detriment. I mean, I just checked the numbers before we came on, it's almost impossible to imagine that one out of every 297 Americans is now dead of COVID.

D Dr. Halena Gazelka 10:36

Wow.

D Dr. Greg Poland 10:37

In a disease we know how to prevent. It's just, just...

D Dr. Halena Gazelka 10:43

The statistics you just gave on vaccination rates, really, it really does astound me.

D Dr. Greg Poland 10:48

And as a result of that, if you look, 48% of the wastewater samples around the country now have moderate to high levels of COVID and 17% of them have very high levels. That always happens first, then we see a surge in cases, then we see a surge in hospitalizations. And then among the under or unvaccinated, we see an increase in deaths. And so many of us think that's what will happen yet again, year three.

D Dr. Halena Gazelka 11:20

So, Greg, what is going to happen with vaccines over the next year, if we have all of these variants that are escaping our ability to manage all of them. what happens with vaccines?

D Dr. Greg Poland 11:33

Yeah, so what the vaccines still do is they increase our protection, and they do so excellently, in regards to death, hospitalization, severe disease. They decrease, but do not eliminate, the risk of having symptomatic illness, usually mild, asymptomatic, or at worse, moderate illness, so they're worthwhile to get. They help, but don't prevent transmission, they do decrease it somewhat. So, if people are saying, well, I don't want to get it, I got sick anyway, or you know, aunt June got sick. Yeah, but she didn't end up in the hospital, and that's what the vaccines are really built for those complications. They decrease, but don't eliminate, the risk of long COVID and COVID complications. And in combination with wearing a proper mask properly, you can

live your life. But people don't want to hear that message and they don't attend to it. It's the most amazing distortion of human thinking that I've seen in relation to vaccinology in my career.

D Dr. Halena Gazelka 12:45

It's been an interesting time, that's for sure.

D Dr. Greg Poland 12:49

The other part, Halena, sorry, the other part I wanted to say is that, as a consequence, new vaccines are being developed, so called third generation vaccines. So, there's already been a trial of a nasal spray vaccine, an inhaled vaccine, an oral tablet, or a patch. So, as we get to those, I think we will, at that point, be able to dampen down COVID to something like a seasonal influenza.

D Dr. Halena Gazelka 13:17

Well, that is great news.

D Dr. Greg Poland 13:18

Yeah.

D Dr. Halena Gazelka 13:19

Greg, tell us about the third viral member of the tridemic, influenza.

D Dr. Greg Poland 13:25

Well, influenza A in particular has surged early in the U.S. And very likely, over the holidays, we will see this increase. This is problematic. It's going to mean that an already overburdened U.S. medical system is going to be further burdened. Already, try to get into an ER around the country. It's very difficult. Try to see a physician in many areas of the country, very difficult. But we're seeing influenza, about 80% of it is H3N2, the most dangerous strain of influenza. About 20% of it H1N1. Both of those are very well matched with what's in the vaccine. But again, we can't convince people to get the vaccine. The vaccine, like COVID vaccine, is very good at preventing hospitalization and death. It's effective, not completely, in reducing symptomatic illness. But we're really giving these vaccines to prevent complications and severe disease and hospitalization. If you look at recent numbers here in the U.S., there have been so far this fall season four and a half million estimated influenza infections, 38,000 hospitalizations, and we've already had over 2000 deaths.

D Dr. Halena Gazelka 14:56
Already?

D Dr. Greg Poland 14:57
Again, preventable. And the other thing I want to say is that, you know, for people who are immunocompromised, who have a lot of concomitant medical problems, or who are senior citizens, that's a situation where we want to test. Because if you have COVID, we have antiviral medication that's effective. If you have influenza A, we have different antiviral medication that's effective. If you have both and you can be co-infected, it's yet a different set of treatment that we bring to bear compared to say, RSV. So, it's important to protect yourself, and two of the three can be protected against with a vaccine. All three can be protected against with wearing a proper mask properly.

D Dr. Halena Gazelka 15:50
All right, good to know. Well, Greg, you and I were talking before we came on the air that we have a little bit of sad news to share with our listeners that as we move forward into 2023, we're switching direction a little bit. And we are going to be sunsetting our Q&A podcast in December of this year. But the Mayo Clinic News Network will continue to deliver the latest information on what you need to know about health care news. I also am going to keep you on speed dial, Greg, because we may have to we may have to crawl out of the woodwork and update people.

D Dr. Greg Poland 16:32
That's fine, we will be working away, following the numbers, following the research, digesting and synthesizing it all.

D Dr. Halena Gazelka 16:40
Greg, can you believe that you and I met doing a podcast and have become wonderful colleagues and friends as well. We have now done over 100 of these podcasts on COVID. And, think of what we have seen in the last couple of years doing this. How do you reflect back about the work that we've been doing?

D Dr. Greg Poland 17:02
A couple of things, I'll probably get choked up. One has been the incredible outpouring of cards and emails that I've gotten from listeners. And I know that's been true for you. And we often trade them with each other. That's been an immense encouragement to me through 14 and 16 hour-long days. The other thing is it has been a high point in my career to work with you in such desperate times. I mean, think of in 2020 and 2021, people didn't know where to turn. And we came along at the right time, and I think did a very valuable service. I'll go to my grave

thankful for the opportunity. You know, as physicians we inherently teach and try to keep people well. But I think there are other lessons to be learned here. One is that many, many people were harmed by listening to non-experts, whether they be celebrities, sports figures, politicians, you know, the next-door neighbor. And I think, like in all things medical, talk with your doctor, and look at what highly credible medical centers, particularly academic medical centers, are giving in terms of recommendations. The other thing is the unconquerable value of layered protection measures, you know, distancing when it's important, avoiding crowded indoor venues, especially during respiratory virus season, wearing a proper mask, getting vaccinated, keeping your hands clean. Those are extraordinarily valuable. I know there's a lot of what people are calling COVID fatigue. But the virus doesn't care that we're fatigued. And as I said it will exploit that. Don't let fatigue, letting your guard down, be the reason that you get infected and suffer a complication. Particularly during the holidays. People are traveling, you notice on an airplane, my wife and I get on an airplane, it's us and maybe one other couple that are wearing a mask. And they will suffer from that. It's it's really unfortunate. And the real issue now is, as I said, not severe infection. That's unlikely to happen, at this point. It's the long COVID and the COVID complications that people never expected would happen such that as you know, go to a store, there's inadequate help. There's so many people out of the workplace and it's affecting medical care across the country. So, those would be the main things that I would say is as well as getting vaccines. I know there's a vaccine hesitancy even antivaccine mood across the country. But these have been extraordinarily effective personal and public health measures, and we would be foolish to turn our backs on them.

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Dr. Halena Gazelka 20:12

Greg, I like what you said earlier about presenting the truth. We have very much wanted to be a voice of truth to the public throughout the COVID-19 pandemic. And I would be remiss if I didn't mention that, and that also to bring hope. Hope and healing is the mission of Mayo Clinic. And so thank you for sharing that with me.

D

Dr. Greg Poland 20:35

Well, we did it together. And I'll remind you something I showed you very early on in 2020. I received this postcard from a little girl asking, will a COVID vaccine come along? And would COVID go away one day. And I'm proud to say, you know, over two years later, for this special little girl, the answer is yes. We can now prevent COVID and she can get a vaccine.

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Dr. Halena Gazelka 21:06

I can't end it any better than that. Greg, thank you for being here today.

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Dr. Greg Poland 21:10

My pleasure. Blessings on you.

D

Dr. Halena Gazelka 21:12



Dr. Patricia Sulemka - LIVE

You as well. Once again, we thank Dr. Greg Poland for being with us today to give us our tridemic updates. I hope that you'll learn something. I know that I certainly did and continue to, and we wish each of you a very wonderful day.



21:29

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